

**Change History Log:**

June 11, 2002

In Response Reply to: 02EDU0456

Department of Education
Student Financial Assistance
Carol Seifert
Contracts Office Technical Representative

Subject: Contract # ED-99-DO-0002
Task Order # 80 Enterprise Application Integration (EAI) Core Architecture Release 3.0
Deliverable 80.1.2 EAI Release 3.0 Technical Specification

Dear Ms. Seifert:

Enclosed is the EAI Release 3.0 Technical Specification that is required by the subject task order. Attached are suggested changes from the reviewers. Future revisions are not planned, but the document will be updated as appropriate.

ACCENTURE, LLP

Deliverable 80.1.2 EAI Release 3.0 Technical Specification					
Suggested Changes/Comments	Page	Author	Date	Change Made Y/N	Comment
<p>Concern: Wording "This document provides an overview of the Technical Specification ..."</p> <p>The above statement implies that this document only provides a high-level overview rather presents the actual design details that are normally presented in a Technical Specification.</p> <p>Correction: Expectation is that a Technical Specification will present the detailed design for all capabilities to be implemented.</p>	Page 1, section 1 - Introduction as well as other places in the document	Ganesh Reddy	June 10, 2002	Y	In progress – this issue will be addressed via the correction implemented throughout the document.
<p>Concern: Wording "EAI Release 3.0 will build additional and enhanced technical services ..."</p> <p>This Technical Specification does not contain a single list describing the specific services to be provided, including identifying:</p> <ul style="list-style-type: none">• Additional versus enhanced services• EAI team/personnel versus equipment	Page 1, section 1 – Introduction as well as other places in the document	Ganesh Reddy	June 10, 2002	Y	In progress – this issue will be addressed via the correction implemented throughout the document.

<p>provided services or combinations of people and software</p> <ul style="list-style-type: none"> - Existing, upgraded, and new hardware and software components to be used for EAI Release 3 <p>Changes or differences in moving from EAI Release 2 to Release 3.</p> <p>Correction: Identify and describe the specific additional and enhanced technical services.</p>					
<p>Concern: Section 1.2 lists 10 applications ("implemented and underway in FY02)</p> <p>Figure 1 shows 9 applications (including "Other") as the EAI Vision.</p> <p>Some, but not all, of the applications, presented in these two sections (as well as elsewhere in this document), match. In particular, there are inconsistencies among the applications presented in various lists in this Technical Specification.</p> <p>For example, the tables of Business Functions in section 2.2, identify the following additional applications (not specifically identified on Figure 1):</p> <ul style="list-style-type: none"> • OCT • CMDM • FAFSA (on Web) • DMCS (and replacement) • Eapp • Customer Service • Common Servicing for Borrows <p>Also mentioned elsewhere in the document are:</p> <ul style="list-style-type: none"> - IVR - PIN Site <p>Correction: Ensure that a complete/consistent set of applications is identified throughout the Technical Specification or explain any differences between lists of applications.</p>	<p>Page 1, section 1.2, bullets</p> <p>Page 3, section 2.1, Figure 1 as well as other places in the document</p>	Ganesh Reddy	June 10, 2002	Y	<p>Corrected – added label – "Figure 1 is an example of the general EAI vision. It is not intended to be a comprehensive diagram covering all aspects of the work."</p> <p>The tables in section 2.2 are describing individual functions, not systems or applications, systems or applications noted in the "business functions – Planned" should not be included in the list on page 1 because they are not implemented or underway yet.</p> <p>Section 2.2 does list under "business functions installed" interaction with systems <i>OCTS</i> and <i>CMDM</i>, these were added to the list on page 1 under "applications implemented and underway"</p>
<p>Concern: Wording "This is a design document, which builds off of the requirements outlined in 80.1.1 EAI Release 3.0 Assessment and Requirements Matrix".</p> <p>The above statement is open to different interpretations with respect</p>	Page 2, section 1.4	Ganesh Reddy	June 10, 2002	Y	<p>This will be addressed by adding a RTM</p>

to be meaning of “builds off”. There does not appear to be a clear mapping of requirements in the Requirements Matrix to the “designs” presented in this Technical Specification.					
Correction: Relate designs (i.e., EAI components and services) to specific requirements (e.g., by requirement number).					
Concern: It is indicated that Figure 1 “depicts execution topology and product mapping for the EAI Infrastructure Domain. Figure 2 is entitled EAI Infrastructure Domain, but there is no discussion explaining how Figures 1 and 2 are related. Correction: Explain relationship of Figures 1 and 2.	Page 3, section 2.1, 4 th paragraph Page 11, Figure 2	Ganesh Reddy	June 10, 2002	Y	Figure 1 is not meant to be exact it is a representation of a broad vision – this will be solved by resolution of another issue about the intention of figure 1.
Concern: Wording “The technical services that comprise EAI are grouped into four layers with the EAI framework”. These four layers (also called components) are named and what they will provide are identified, but how these services will be provided is not described. Correction: Explain how services will be provided for: <ul style="list-style-type: none"> • Business Process Management • Application Connectivity • Transformation and Formatting • Communications Middleware 	Page 9, section 3.1	Ganesh Reddy	June 10, 2002	Y	Sections 3.1.1 to 3.1.4 have been references to corresponding sections in 3.2.
Concern: Wording “EAI includes the following components or nodes”. Three components are named and what they will provide are identified, but how components will be implemented and used are not described except to identify IBM MQSeries features. Correction: Explain how the following will be implemented and used by applications: <ul style="list-style-type: none"> • Queue Managers • Message Broker • Application Adapters 	Page 10, section 3.2	Ganesh Reddy	June 10, 2002	Y	Section 3.2 has been referenced by sections in 3.1
Concern:	Page 11, Figure	Ganesh Reddy	June 10, 2002	Y	Figure 2 was not

Figure 2 is presented without a specific reference in the text or a discussion about the contents of the figure. Correction: Explain contents of Figure 2.	2				discussed in the text and was determined to be un-necessary and removed
Concern: Figure 2 is entitled “EAI Infrastructure”. Figure 7 has a grayed area labeled “EAI Infrastructure”. There is no discussion relating Figures 2 and 7 with respect to the EAI Infrastructure. Correction: Explain relationship and nature of contains in Figures 2 and 7.	Page 11, Figure 2 Page 23, Figure 7	Ganesh Reddy	June 10, 2002	Y	Figure 2 has been removed
Concern: A list is presented of what will be done during a Business Process Analysis. Missing is a discussion of how these actions will be accomplished – e.g., the specific methodologies and/or tools to be applied. Correction: Explain the techniques (e.g., procedures, tools, etc.) to be used to perform Business Process Analysis	Page 11, section 3.3	Ganesh Reddy	June 10, 2002	Y	The paragraph and bulleted list in section 3.3 have been reorganized to better reflect the procedures of the business process analysis.
Concern: The following new initiatives are described including possible interfaces with other systems: <ul style="list-style-type: none"> Consistent Answers NSLDS Replacement FAFSA on the Web (FOTW) Electronic Financial Statements (eZ-Audit) DMCS Replacement There are no detailed designs and little or no technical descriptions with respect to using EAI with these new initiatives. Correction: Explain how EAI Release 3 will be used by new initiatives.	Page 12, section 3.4	Ganesh Reddy	June 10, 2002	Y	Each of the bulleted areas is still having interface requirements defined and was labeled as such.
Concern: Interface diagrams or documentation references are presented for interface implementations that are in process for the following systems: <ul style="list-style-type: none"> COD FMS FP Data Mart ECB CMDM There are no specific discussions	Page 16, section 3.5	Ganesh Reddy	June 10, 2002	Y	Each of the interfaces were labeled as implemented and deployed and refer to their ICDs for implementation details

<p>about the role EAI Release 3 will play relative to any of the interfaces. Also there is no discussion about an potential impacts in transitioning from EAI Release 2 to Release 3 for in-progress implementations</p> <p>Correction: Explain how EAI Release 3 will be used by the in- process interface implementations.</p>					
<p>Concern: Wording “Only servers in the authorized list will be permitted to connect/utilize EAI resources.</p> <p>Specific EAI resources are not identified.</p> <p>Correction: Identify the specific EAI resources for which only authenticated connectivity will be permitted.</p>	Page 18, section 3.6.2	Ganesh Reddy	June 10, 2002	Y	Corrected – the text was modified to explain that each server has its own list of particular servers that it is allowed to communicate with, there is no single list.
<p>Concern: The table, entitled FSA Queue Managers, lists the names of various queue managers, but does not indicate where they are defined and/or located.</p> <p>Correction: Explain where named Queue Managers are defined.</p>	Page 20, section 2.7.1, table	Ganesh Reddy	June 10, 2002	Y	Corrected – An appendix was added to show which servers at the VDC have MQ software installed on them.
<p>Concern: A system/application named “LOWeb” is not mentioned in the document text. The term “LOWeb” only appears in a table and on a figure.</p> <p>Correction: Discuss “LOWeb” application.</p>	Page 20, section 2.7.1, table Page 23, section 3.9, Figure 7	Ganesh Reddy	June 10, 2002	Y	Corrected - the LOWeb row has been removed from the table of queue managers because it was not necessary.
<p>Concern: Wording “Code will be migrated onto test UNIX servers on a regularly scheduled time basis”.</p> <p>There is no indication what code (e.g., for applications, developed for EAI, etc.) will be migrated on a regular basis.</p> <p>While it is not stated, it is assumed that migration is from Development. Migration control does not discuss code changed in Development.</p> <p>Correction: Explain how the code migration process relates to EAI Release 3.</p>	Page 20, section 3.7.2	Ganesh Reddy	June 10, 2002	Y	Corrected – reworded to indicate that it applies to EAI code in general and that it is EAI release 3 code from the development server that is being migrated to the test server.
<p>Concern: The process of migrating code to test and then to production environments does not mention</p>	Page 20, section 3.7.3	Ganesh Reddy	June 10, 2002	Y	No changes needed – 3.7.3 refers to testing “After successful testing on the test

<p>testing the code.</p> <p>Correction: Explain when and where code testing is performed during the code migration process.</p>					UNIX servers"
<p>Concern: Wording "1. Create a tar file of the test code on the UNIX server with the ClearCase tool".</p> <p>ClearCase is a tool for managing software changes by providing the functions of version control, workspace management, process configuring, and build management. Tar is a Unix command used to create an archive file.</p> <p>Correction: Explain how the ClearCase tool will be used to create a tar file.</p>	Page 21, section 3.7.3, list	Ganesh Reddy	June 10, 2002	Y	Corrected – expanded to 8 steps, step 1 became 2 steps, 1) ftp files from clearcase to UNIX server, 2) tar files on the UNIX server
<p>Concern: It is indicated that the EAI Team will perform:</p> <ul style="list-style-type: none"> Architecture problem investigation Architecture problem resolution Architecture production change and enhancement support instructions Architecture product specialty support <p>No definitions or examples are given for architecture problems, production changes, or products</p> <p>Correction: Describe and/or give examples of architecture problems, production changes, and products.</p>	Page 22, Section 3.8.2, EAI Team bullets	Ganesh Reddy	June 10, 2002	Y	Corrected – this was determined to be unnecessary for the scope of this document
<p>Concern: Wording "The EAI infrastructure executes in production environments ..."</p> <p>There is no indication if there is a similar EAI infrastructure for the following environments:</p> <ul style="list-style-type: none"> Development User Acceptance Testing Inter System Testing <p>Correction: Define all environments where the EAI infrastructure is executed.</p>	Page 23, section 3.9	Ganesh Reddy	June 10, 2002	Y	Corrected – changed to indicate that figure 7 is of production environment. Added brief acknowledgement of development and testing environments.
<p>Concern: Specific responsibilities of the EAI team are mentioned at various places in this Technical Specification.</p> <p>It would be helpful to provide a</p>	Overall	Ganesh Reddy	June 10, 2002	Y	No changes needed – this will be addressed by expanding the bulleted list in 3.8.2 of EAI team



single list of all responsibilities to be undertaken by the EAI team. Correction: Provide consolidated list of EAI team responsibilities.					responsibilities.
Minor Concerns					
Concern: Wording "EAI Security provides an description ... the overall FSA security architecture". "an description" should be "a description". "architecture" should be "architecture". Correction: Correct sentence.	Page 2, section 3.1	Ganesh Reddy	June 10, 2002	Y	Corrected as suggested.
Concern: "One of the benefits of the EAI is that is supports re-use of components". 2 nd "is" should be the word "it". Correction: Change 2 nd "is" to "it".	Page 3, section 2.1.1, 1 st sentence	Ganesh Reddy	June 10, 2002	Y	Corrected as suggested.
Concern: Tables are presented describing Installed, In-progress, Planned, and Potential Business Functions. It is indicated that these functions are provided by one or more applications. A separate column in the table identifying applications associated with business functions would help highlight the relationship of applications and business functions. Most of this information is currently presented in narrative descriptions. Presenting this information in a more structured manner would aid understanding and completeness Correction: Ensure that each application associated with a business function is clearly identified including the direction of data flow among applications.	Page 4, section 2.2, tables	Ganesh Reddy	June 10, 2002	Y	Corrected – Added text to explain that this particular section is intended only as a non-technical view of capabilities.
Concern: Wording "... scheduled for April 29, 2002" occurs for five table entries. Since this Technical Specification, dated May 3, 2002, was published after April 29, there should be a clear indication if the April 29 date was met or if a new later date has been set.	Page 4, section 2.2, tables	Ganesh Reddy	June 10, 2002	Y	Corrected – dates have been updated

Correction: Clarify schedule dates.					
<p>Concern: Wording "... to determine of the Pell eligibility and Pell authorization. It is envisioned that this Pell data information would ..."</p> <p>Delete "of the" and "data".</p> <p>Correction: Change to "... to determine Pell eligibility and Pell authorization. It is envisioned that this Pell information would ..."</p>	Page 8, table – Business Functions-Potential: Determine Pell Eligibility	Ganesh Reddy	June 10, 2002	Y	Corrected as Suggested.
<p>Concern: Wording "This will be done by:"</p> <p>This is an incomplete sentence. It appears that possibly a date is missing.</p> <p>Correction: Complete sentence.</p>	Page 12, section 3.4.1, last sentence	Ganesh Reddy	June 10, 2002	Y	Corrected – dates have been updated
<p>Concern: Wording "... will be complete the first of March 2003."</p> <p>Correction: Change to "... will be completed by the first of March 2003."</p>	Page 12, section 3.4.1.1	Ganesh Reddy	June 10, 2002	Y	Corrected as suggested
<p>Concern: Wording "Consistent Answers will require interfaces with up to 9 other FSA systems"</p> <p>This indicates that Consistent Answers is a system.</p> <p>Correction: Clarify if Consistent Answers is a project or a new system or both.</p>	Page 12, section 3.4.1.2	Ganesh Reddy	June 10, 2002	Y	Corrected – reworded to indicate Consistent Answers is a system.
<p>Concern: Wording "These interfaces will almost all be transactional".</p> <p>This statement implies, without identifying, that some interfaces are not transactional</p> <p>Correction: Clarify which interfaces are or are not transactional.</p>	Page 12, section 3.4.1.2	Ganesh Reddy	June 10, 2002	Y	Corrected – reworded to reflect the ongoing nature of these decisions.
<p>Concern: Wording "... except DLCS and 14 other Government Agencies including 36 Guarantee Agencies and 12 Private Collection Agencies".</p> <p>This implies that the 14 Government Agencies include 36 Guarantee Agencies and 12 Private Collection Agencies. It appears that there may be missing comas.</p>	Page 15, section 3.4.5.3	Ganesh Reddy	June 10, 2002	Y	Corrected – reworded to more accurately reflect the deployment.

Correction: Clarify statement.					
<p>Concern: Wording “ In general, security can be addressed at many different levels in a messaging environment. These security levels are identified as the application level, the architecture level and the infrastructure level (operating systems, network, and servers)”.</p> <p>It is indicated that there are “many different levels” and then states “These security levels are identified” by 3 levels. Does “many” mean “three” or do the 3 levels include many other levels or are some of the many not included in the 3 levels?</p> <p>Correction: Clarify the many different security levels.</p>	Page 18, Section 3.6	Ganesh Reddy	June 10, 2002	Y	Corrected – changed wording to more accurately reflect the number of levels
<p>Concern: Wording “Developers should not be changing code on test and production UNIX servers”.</p> <p>Is this only a stated policy or are there safeguards to detect and/or prevent such code changes?</p> <p>Correction: Clarify how developers are prevented from making code changes on test and production UNIX servers.</p>	Page 20, section 3.7.2, 1 st paragraph	Ganesh Reddy	June 10, 2002	Y	Corrected – text was added to indicate that the change control process at the VDC is followed
<p>Concern: Wording “EAI will use Rational ClearCase to version control code ...”</p> <p>Rational ClearCase is a package used by people. Thus, it is assumed “EAI” means “The EAI team” and/or other personnel. It is also assumed that the word “to” should be “for”.</p> <p>A seven-step process is described without identifying who will perform each step.</p> <p>Correction: Clarify who is responsible for using Rational ClearCase.</p>	Page 20, section 3.7.3.	Ganesh Reddy	June 10, 2002	Y	Corrected – text was added to indicate that all of the EAI team will be using ClearCase
<p>Concern: Figure 7 appears in document prior to its reference in the text.</p> <p>Correction: Discuss/reference figure before presenting figure.</p>	Page 23, section 3.9, Figure 7	Ganesh Reddy	June 10, 2002	Y	Corrected as suggested.
<p>Concern: Wording “5. The DI Manger receives ...”</p> <p>Correction:</p>	Page 24, section 3.9.1, item 5	Ganesh Reddy	June 10, 2002	Y	Corrected as suggested.



Change "Manger" to "Manager".					
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